



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/943,433 | 08/30/2001 | Allen D. Parks | NC 82343 | 9614 |

23501 7590 04/20/2005

NAVAL SURFACE WARFARE CENTER, DAHLGREN DIVISION
OFFICE OF COUNSEL, CODE XDC1
17320 DAHLGREN ROAD
DAHLGREN, VA 22448-5110

| EXAMINER |
|----------|
|----------|

LANIER, BENJAMIN E

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2132

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/943,433 | | PARKS ET AL. | |
| | Examiner | | Art Unit | |
| | Benjamin E Lanier | | 2132 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 30 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

li

h

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 14 recites the limitation "the master clock" in line 1. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 14 recites the limitation "the slave clock" in line 1. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 14 recites the limitation "the delay" in line 2. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 14 recites the limitation "the system" in line 2. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 14 recites the limitation "the method" in line 2. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 14 recites the limitation "process 218" in line 3. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 14 recites the limitation "station 100" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2132

10. Claim 14 recites the limitation "station 200" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Fullerton, U.S. Patent No. 6,133,876. Referring to claims 1, 4, 5, 9, 12, Fullerton discloses a method for position determination is a system using homodyne receivers (Col. 5, lines 10-12), which meets the limitation of a master and slave homodyne detector, wherein a first transceiver having a first clock providing a first reference signal is positioned (Col. 2, lines 24-27), which meets the limitation of means for generating a laser beam signal disposed in the master device, wherein the signal beam has first and second operating modes. A first sequence of pulses are transmitted from the first transceiver to a second transceiver having a second clock that provides a second reference signal (Col. 2, lines 27-35), which meets the limitation of means for applying the signal beam to the slave device over a master communication channel. Then a second sequence of pulses is transmitted from the second transceiver. The first transceiver receives the second sequence of pulses and the first transceiver is synchronized with the second sequence of pulses (Col. 2, lines 34-38), which meets the limitation of means for recording master and slave correlation patterns generated by the master and slave homodyne detectors while the signal beam

Art Unit: 2132

cycles between first and second operating modes, means for transmitting the master correlation pattern and associated first and second times at which the signal beam shifted between the first and second operating modes and between the second and first operating modes over the second communication channel. A delayed first reference signal is generated in response to the synchronization with the second sequence of pulses. Then a time difference between the delayed first reference signal and the first reference signal is measured. The time difference indicates a total time of flight of the first and second sequence of pulses (Col. 2, lines 38-44), which meets the limitation of means for calculating a time variance between a portion of the master correlation pattern between the first and second times to the slave correlation pattern to thereby determine the time offset between the master and slave correlation patterns, means for applying the time offset to the slave clock.

Referring to claims 2, 6, 10, Fullerton discloses that a delayed first reference signal is generated in response to the synchronization with the second sequence of pulses (Col. 2, lines 38-41), which meets the limitation of generating the master correlation pattern in response to a master local oscillator beam and a time-delayed version of the signal beam.

Referring to claims 3, 7, 11, Fullerton discloses that a time difference between the delayed first reference signal and the first reference signal is measured (Col. 2, lines 41-43), which meets the limitation of the time delay associated with the time delayed version of the signal beam corresponding to a signal beam transit time between the master and slave devices.

Referring to claims 8, 13, Fullerton discloses that the signal variance is determined between the two transceivers (Col. 8, line 67 – Col. 9, lines 8).

Referring to claim 14, Fullerton discloses a time difference between the delayed first reference signal and the first reference signal is measured and the time difference indicates a total time of flight of the first and second sequence of pulses. The distance between the first and second transceiver is determined from the time difference (Col. 2, lines 41-46), which is later used to calculate speed (Col. 9, lines 24-49).

Drawings

13. New corrected drawings are required in this application because lines, letters, and numbers are not uniformly thick and well defined, clean, durable, and black. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gelin, U.S. Patent No. 5,163,071

Bennett, U.S. Patent No. 5,307,410

Tamura, U.S. Patent No. 6,247,138

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E Lanier whose telephone number is 571-272-3805. The examiner can normally be reached on M-Th 7:30am-5:00pm, F 7:30am-4pm.


Art Unit: 2132

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Benjamin E. Lanier



GILBERTO BARRON JR
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100